

Customer No.: 31561
Docket No.: 13063-US-PA
Application No.: 10/710,843

REMARKS

Applicants have carefully considered the Office Action dated April 4, 2007, and the amendments above together with the remarks that follow are presented in a bona fide effort to address all issues raised in the Action and thereby place this case in condition for allowance. Favorable reconsideration and allowance of the application and presently pending claims 1-17, as amended, are respectfully requested.

Present Status of the Application

Claim 3 is objected to because of a typographical error. Claims 1, 2, 4 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoss et al. (U.S. Pub. No. 2004/0248334 A1, "Hoss" hereinafter). Furthermore, the Office Action has rejected claim 3 under 35 U.S.C. 103(a) as being unpatentable over Hoss as applied to claim 1 above, and further in view of Hata et al. (U.S. Pub. No. 2004/0245540 A1, "Hata" hereinafter). Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoss as applied to claim 1 above in view of Ohtsuka et al. (U.S. Pub. No. 2006/0175621 A1, "Ohtsuka" hereinafter). Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoss as applied to claim 1, and further in view of Ueda et al. (U.S. Pub. No. 2005/0218414 A1, "Ueda" hereinafter). Applicants gratefully acknowledge the Examiner's indication of allowable subject matter, i.e. claims 8-17 have been allowed, whereas claims 18-30 were already cancelled pursuant to the provisions set forth in 37 C.F.R. 1.142 in reply to the previous Restriction Requirement mailed on January 17, 2007.

In response thereto, Applicants have amended claim 3 to cure the objection thereto,

Customer No.: 31561
Docket No.: 13063-US-PA
Application No.: 10/710,843

as suggested by the Examiner, and correspondingly revised claim 10 to correct minor informalities in review of the claims. Care has been exercised to avoid the introduction of new matter, and adequate descriptive support for the present amendment should be apparent throughout the originally-filed disclosure. Thus, the entry of the present amendments is fervently requested. On the other hand, Applicants respectfully traverse the rejections addressed to claim 1-7 for at least the reasons set forth below.

Discussion of Claim Rejections under 35 U.S.C. 102(e)

Claims 1, 2, 4 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoss.

In the statement of the rejection, the Examiner refers to FIGs. 1B through 1G of Hoss, contending that Hoss's teaching of a method of fabricating a semiconductor laser device is corresponding to Applicants' independent claim 1 and dependent claims 2, 4 and 6. Applicants respectfully disagree.

The factual determination of lack of novelty under 35 U.S.C. 102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the possession of one having ordinary skill in the art. *Helifix Ltd. V. Blok-Lok, Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994). Moreover, in imposing the rejection under 35 U.S.C. 102, the Examiner is required to specifically identify wherein an applied reference is perceived to identically disclose each feature of a claimed invention. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Lindemann Maschinenfabrik GMBH v.*

Customer No.: 31561
Docket No.: 13063-US-PA
Application No.: 10/710,843

American Hoist & Derrick Co., 730 F.2d 1452, 221USPQ 481 (Fed. Cir. 1984).

After a careful review, there are significant differences between the claimed invention and the method disclosed by Hoss, and said differences would preclude the factual determination that Hoss identically describes the claimed invention within the meaning of 35 U.S.C. 102.

With respect to Applicants' originally-filed claim 1, the Examiner regards a sacrificial layer (or a lift-off layer) 4 and a masking layer 2 depicted in FIGs. 1B-1G of Hoss as a first mask layer and a second mask layer of Applicants' claim 1, respectively (see page 3, lines 4-5 and page 4, lines 1-2 of the Office Action). Accordingly, it is inferred that a masking layer 1 disclosed by Hoss corresponds to a third mask layer provided by the present invention.

As recited in claim 1 of the present invention, a method of fabricating a semiconductor laser device comprises the step of removing a portion of the epitaxial structure using the first mask layer and the third mask layer as an etching mask to form the ridge structure. Namely, suppose that each feature of Applicants' claim 1 is perceived to be identically disclosed by Hoss, the sacrificial layer 4 and the masking layer 1 depicted in FIG. 1D of Hoss ought to be employed as the mask to remove a portion of the epitaxial structure, such that the ridge structure is formed. Nevertheless, Hoss actually adopts the sacrificial layer 4 (purportedly referred to the first mask layer of Applicants' claim 1) and the masking layer 2 (reputedly referred to as the second mask layer of Applicant's claim 1) to remove a Pt p-type contact metal layer 5 and an epitaxial layer sequence 6.

On the other hand, it is claimed to perform steps of selectively removing a part of

Customer No.: 31561
Docket No.: 13063-US-PA
Application No.: 10/710,843

the sacrificial layer 4 from the uncovered side areas and applying the coating 8 at least to the sidewalls of the previously-produced structure according to claim 1 of Hoss, wherein the difficulty of implementing said two steps is relatively high. On the contrary, the step of selectively removing a part of the sacrificial layer 4 from the uncovered side areas is not required in the Applicants' invention. Moreover, when an insulating layer is formed over the epitaxial structure according to the subject invention, it is not necessary to cover only a portion of the side walls of the sacrifice layer 4 as claimed in Hoss. Based on the above, the method of fabricating the semiconductor laser device proposed by the present invention is much simpler and easier than the method disclosed in Hoss.

In light of the foregoing, the rejection of claim 1 under 35 U.S.C. 102(e) is not legally viable, and thus the Examiner is requested to reconsider and withdraw the rejection.

Because independent claim 1 is allowable over the prior art of record, its dependent claims 2, 4 and 6 are allowable as a matter of law, for at least the reason that these dependent claims contain all features/elements/steps of their independent claim 1. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Discussion of Claim Rejections under 35 U.S.C. 103(a)

Claim 3 is rejected under 35 U.S.C. 103(a) for obviousness predicated upon Hoss as applied to claim 1 above, and further in view of Hata. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoss as applied to claim 1 above in view of Ohtsuka. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoss as

Customer No.: 31561
Docket No.: 13063-US-PA
Application No.: 10/710,843

applied to claim 1, and further in view of Ueda. Applicants respectfully present the following reasons to rebut the rejections.

Applicants incorporate herein the arguments advanced above in traversal of the rejection of claim 1 under 35 U.S.C. 102(e) predicated upon Hoss, and further submit that the secondary references Hata, Ohtsuka and Ueda do not cure the argued deficiencies of Hoss for at least the following reasons.

The Examiner makes an allegation that Hata teaches using a reactive ion etching (RIE) method including chlorine, which would have been obvious to a person having ordinary skill in the art at the time the invention was made that utilizing RIE is a conventional and well-known process in industry as taught by Hata.

Similarly, Ohtsuka purportedly discloses the use of wet etching procedures to etch masking layers and the use of a boiling mixture of nitric acid and hydrochloric acid as wet etchant, which would have been obvious to a person having ordinary skill in the art at the time the invention was made that a wet etching step is a broad process that also includes utilizing a boiling mixture of nitric acid and hydrochloric acid solution as it is well known in the art as taught by Ohtsuka et al.

Besides, according to the Examiner, Ueda teaches a semiconductor laser device which includes utilizing a p-type Ni/Au ohmic contact layer which is conventional and well-known to one of ordinary skill in the art, and therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made that a P-type contact metal layer is a broad definition including any ordinary P-type metal layer such as P-type Ni/Au ohmic contact layer as taught by Ueda.

However, none of Hata, Ohtsuka and Ueda discloses the formation of the first, the

Customer No.: 31561
Docket No.: 13063-US-PA
Application No.: 10/710,843

second and the third mask layers on the epitaxial layer as provided in the present invention. Furthermore, the technical feature of forming the ridge structure predicated upon the correlations of each of the mask layers taught by the present invention is not disclosed in the secondary cited references of record. Thus, even if the applied references are combined as suggested by the Examiner, Applicants do not agree that the requisite realistic motivation has been established, and the claimed invention will not result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d, 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

For at least the reasons indicated hereinbefore, the rejection of claim 1 under 35 U.S.C. 103(a) is novel and non-obvious over the cited reference of record, and thus should be allowed.

Because independent claim 1 is allowable over the prior art of record, its dependent claims 3, 5 and 7 are allowable as a matter of law, for at least the reason that these dependent claims contain all features/elements/steps of their independent claim 1. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Customer No.: 31561
Docket No.: 13063-US-PA
Application No.: 10/710,843

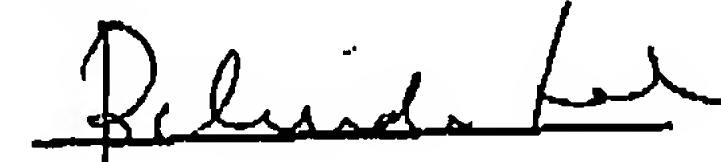
CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-17 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application or resolve any outstanding issues, the Examiner is invited to call the undersigned.

Date :

July 3, 2007

Respectfully submitted,



Belinda Lee

Registration No.: 46,863

Jianq Chyun Intellectual Property Office
7th Floor-1, No. 100
Roosevelt Road, Section 2
Taipei, 100
Taiwan
Tel: 011-886-2-2369-2800
Fax: 011-886-2-2369-7233
Email: belinda@jicpgroup.com.tw
Usa@jicpgroup.com.tw